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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,778	08/07/2001	John Cooper	P280281	3688
909	7590	07/13/2004	EXAMINER	
PILLSBURY WINTHROP, LLP			GREENE JR, DANIEL LAWSON	
P.O. BOX 10500			ART UNIT	PAPER NUMBER
MCLEAN, VA 22102			3641	

DATE MAILED: 07/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/830,778	<b>Applicant(s)</b> COOPER ET AL.
	<b>Examiner</b> Daniel Greene, Jr.	<b>Art Unit</b> 3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 09 April 2004.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-34 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) \_\_\_\_\_ is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) 1-34 are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. After review of the application and the pending claims it is noted that a further Lack of Unity is warranted. While applicant's election of species A is noted a new election including said species A-F is presented below. Any inconvenience to applicant is regretted.
2. This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-28, drawn to a combination (detonator).

Group II, claim(s) 29, drawn to a subcombination (initiating element).

Group III, claim(s) 30-32 drawn to a process of manufacture (detonator manufacture).

Group IV, claim(s) 33, drawn to a process (method of blasting).

Group V, claim(s) 34, drawn to a composition (explosive).

3. The inventions listed as Groups I-V do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: There is no special technical feature, common to all groups, that defines a contribution over the prior art of record (see for instance US 5,385,098 (Lindquist)). Furthermore applicant's numerous species as set forth below provide for multiple inventions. That is under PCT rules

applicant is entitled one invention per permissible category. For instance, one process and one apparatus, or one product, process of making said product and use of said product. Two products, two uses, etc. are not permitted.

4. Upon election of one of the groups I-V, applicant is further required to elect from the species listed below. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1:

- A. The embodiment of figure 1.
- B. The embodiment of figure 2.
- C. The embodiment of figure 3.
- D. The embodiment of figure 4.
- E. The embodiment of figure 5.
- F. The embodiment of figure 6.

5. Upon election of one of species A-F above, applicant is further required to elect from the species listed below. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1:

- a. The embodiment wherein the confinement sleeve is steel.
- b. The embodiment wherein the confinement sleeve is copper.
- c. The embodiment wherein the confinement sleeve is stainless steel.

6. Upon election of one of species a-c above, applicant is further required to elect from the species listed below. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1:

- i. The embodiment wherein the igniting device is a electric match.
- ii. The embodiment wherein the igniting device is a bridge wire.
- iii. The embodiment wherein the igniting device is a safety fuse.
- iv. The embodiment wherein the igniting device is a detonating cord.
- v. The embodiment wherein the igniting device is a shock tube.

7. Upon election of one of species i-v above, applicant is further required to elect a single species of **each** of the following for the purpose of examination. This additional requirement is to facilitate examining due to the broad range of materials or compositions that can be included in the detonating device/process:

- (1) Elect initiating portion power explosive from those listed in for example claim 2 (e.g., PETN only).
- (2) Elect initiating portion high burn-rate pressurizing initiator material from those listed in for example claim 5(e.g., potassium picrate only).
- (3) Elect initiating portion, if applicable, additional material from those listed in for example claim 18 (e.g., organic fuel only).

*Note that single species requirement must be a closed-ended election (e.g., consisting of). Open-ended elections (i.e., comprising) will be considered non-responsive.*

8. Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

9. The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: The reasons are the same as those set forth above in section 3.

10. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

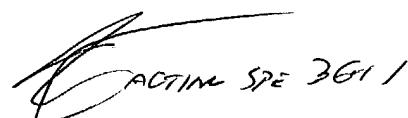
11. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one

or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Greene, Jr. whose telephone number is (703) 605-1210. The examiner can normally be reached on Monday-Friday 8:30-5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on (703) 306-4198. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



A handwritten signature in black ink, appearing to read "DANIEL GREENE JR.", is positioned above the date.

July 8, 2004